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ABSTRACT

This brief presents a review of more than 150 research studies on adolescent reproductive health to identify the factors that contribute to improving adolescent reproductive health. These and other findings are highlighted from the vantage point of adolescents as individuals and within the context of their families, peers, partners, schools, and communities. In addition, a What Works table that identifies specific programs and approaches that have been found successful in improving positive reproductive health behaviors is presented. Experimental studies that focus on reproductive health outcomes discussed in the section on policy implications, show mixed results from evaluations of sexuality education and HIV education programs, which are part of many schools curriculums. Among programs and approaches found to be successful in improving reproductive health behaviors are those that focus on early childhood development, those that combine sexuality education for older children with positive activities, such as participating in voluntary community service and youth development programs, and those that send nurses to visit with teenage mothers with reducing the likelihood of having another child as a teen as one of their goals. (Contains 87 references and 1 table.) (GCP)

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Preventing Teenage Pregnancy, Childbearing, and Sexually Transmitted Diseases: What the Research Shows. American Teens. Child Trends Research Brief.

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Child TRENDS RESEARCH BRIEF

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AMERICAN TEENS
A special look at "what works" in youth development in partnership with
John S. and James L. Knight Foundation

Preventing Teenage Pregnancy, Childbearing, and Sexually Transmitted Diseases: What the Research Shows

By Jennifer Manlove, Ph.D., Elizabeth Terry-Humen, M.P.P., Angela Romano Papillo, M.A., Kerry Franzetta, Stephanie Williams, and Suzanne Ryan, Ph.D.

May 2002

Overview Despite a 22 percent decline in the rate of teenagers giving birth in the United States since 1991, adolescent reproductive health remains a pressing social issue. The U.S. teen birth rate, while declining, is still one of the highest among developed nations. For example, the teen birth rate in the U.S. in the mid-1990s was more than double the rate for Canada and more than four times the rate in Germany. Moreover, sexually transmitted diseases (STDs) in the United States, highest among teens and young adults, are higher than STD rates in other industrialized nations.

Why does this matter? Because adolescent childbearing and STDs carry significant social costs. These costs are borne by the teenagers themselves, by society as a whole, and – perhaps most poignantly – by the children of teenage mothers, who start out life at serious disadvantage.[52] Beyond the social costs are the financial ones which are measured in the billions of dollars.

In this brief, we define improved adolescent reproductive health as involving one of the following behaviors: delaying sexual initiation, reducing the frequency of sexual activity, reducing the number of sexual partners, increasing condom use and overall contraceptive use, and reducing the rate of unintended pregnancy and childbearing, as well as lowering the incidence of STDs among teenagers. To do so, in turn, requires taking a closer look at the range of factors that lead to positive reproductive health behaviors.

In this context, Child Trends conducted a review of more than 150 research studies on adolescent reproductive health to identify the factors that contribute to improving adolescent reproductive health. This Research Brief *highlights these and other findings from the vantage point of adolescents as individuals and within the context of their families, peers, partners, schools, and communities. In addition, we developed a* What Works *table (see insert) that identifies specific programs and approaches that have been found successful in improving positive reproductive health behaviors. Experimental studies that focus on reproductive health outcomes discussed in the section on policy implications, show mixed results from evaluations of sexuality education and HIV education programs, which are part of many schools' curriculums. Among programs and approaches found to be successful in improving reproductive health behaviors are those that focus on early childhood development, those that combine sexuality education for older children with positive activities, such as participating in voluntary community service and youth development programs, and those that send nurses to visit with teenage mothers with reducing the likelihood of having another child as a teen as one of their goals.*

This is the first in a series of *Research Briefs* based on a comprehensive review of adolescent development research. The *American Teens* series will cover reproductive health, physical health and safety, social skills, education, mental and emotional health and civic engagement as they relate to adolescents.

The Adolescent

Many different factors in adolescents' lives affect their reproductive health. Gender, age, and race and ethnicity, play a role, as do attitudes, involvement in activities, and academic performance.

Males are more likely than females to initiate sexual intercourse at an early age and show higher levels of sexual activity. Members of racial and ethnic minority groups are more likely to engage in behaviors that lead to early pregnancy, childbearing, and sexually transmitted infections. As would be expected, older teens tend to be more sexually experienced than younger teens, but they are also more likely to use contraception.[2, 55, 67, 73] Furthermore, early puberty and early menstruation increase the likelihood of being sexually experienced, and teens who appear older or more physically developed are more likely to be involved in sexual activity than their peers.[55, 69]

Adolescents' engagement and performance in school,[3, 47, 82] religious activities,[24, 45, 61] and sports (among girls)[57] are all associated with more positive reproductive health behaviors, which indicates that involving teens in positive activities may help them avoid other risk-taking behaviors. In contrast, teens who are already involved in other risky behaviors (such as using alcohol and drugs) are more likely to engage in risky sexual behavior.[42, 62] Moreover, those teens who report they have been sexually abused were also more likely to be sexually active at an early age and less likely to use birth control.[68, 79]

Teens who have information about reproductive health are more likely to use contraception than those without such information.[50, 51] And teens who make virginity pledges are less likely to engage in early sexual activity among some groups of teens, when some, but not most, teens in their school make such pledges.[6] Adolescents who are highly motivated and confident that they will delay sexual activity are more likely to do so,[13] while teens who perceive that their peers are sexually active are more likely to become sexually active themselves.[55] Those who believe sexual experience will increase others' respect for them are also more likely to have sex.[35]

The Adolescent's Family

Family factors are powerfully related to adolescents' reproductive health. Teens who grow up in intact families with two biological parents and those living in more advantaged families (that is, whose parents have more education and income) are more likely to engage in positive reproductive behaviors than their peers who lack such backgrounds.[54] On the other hand, adolescents whose mothers gave birth as teenagers are more likely to start having sex at an early age and to become teen parents themselves.[50] And teens with sexually experienced siblings or siblings who are pregnant or teen parents are more likely to engage in risky sexual behaviors.[19, 20, 70]

The quality of adolescents' relationships with their parents is also a factor in sexual decision-making. Teenagers who feel that they have a high-quality relationship with their parents and who communicate regularly with them are likely to initiate sex at a later age and behave in less risky ways than their peers.[54] Moreover, teens whose parents talk about sex and birth control with their children, and communicate strong disapproval of sexual activity, are more likely to have positive reproductive health outcomes.[58] Adolescents whose parents are involved with their schooling also exhibit fewer risk-taking behaviors,[47] and those whose parents closely monitor their activities tend to be less sexually active.[54]

The Role of Peers

Research supports the widespread belief that peers play an important role in adolescents' lives. Teenagers with sexually active friends are more likely to have sex themselves.[55] But it is not just peers' behaviors that matter; it is also teens' perceptions of their behavior. Adolescents who believe their friends are having sex are more likely to have sex at an early age.[35] Peer attitudes toward contraception are also important. Adolescents who believe that their peers do not use condoms or that their peers do not like using condoms are less likely to use them.[84]

Peers' educational aspirations also play a role in the choices that teens make about sex. Teens who peers are high achievers, who have strong

educational aspirations, and who avoid other risk-taking behaviors are less likely to have sex at an early age than those whose friends do not share these characteristics.[5] In contrast, adolescents whose peers drink and use drugs, as well as teens who think their peers engage in these activities, are more likely to have sex than those with friends who engage in less risky behaviors.[9, 15, 35, 42] However, teens often seek out friends with similar interests, so it is difficult to determine the causal role of peer attitudes and behaviors. Nevertheless, having peers who engage in risky behaviors can be a marker for an adolescent's likelihood of engaging in risky sexual behaviors himself or herself.

A Teenager's Partners

As would be expected, the characteristics of teenagers' sexual partners play a role in teens' reproductive-health-behaviors. Not surprisingly, adolescents who have dated or who say that they have been in a romantic relationship are more likely to have had sex than those who have not,[9] and married teens report a higher rate of pregnancy than their unmarried peers.[17]

Teens who take part in risky behaviors, such as drug and alcohol use, are more likely to have multiple sexual partners, which puts them at greater risk of both pregnancy and STDs.[72] The link between casual sex and contraceptive use needs further examination. Some studies show that teens in casual relationships are less likely to use contraceptives, at least the first time they have sex,[50] while others suggest that teens may be more likely to use birth control with more casual partners.[22] Teenagers who talk about sexual risk with their partners are more likely to use contraceptives.[65] And teen girls who have sex with a partner of the same religion are less likely to become pregnant outside of marriage.[67]

Adolescents who experience nonvoluntary sex (rape, unwanted sexual intercourse, or abuse) and those with much older sexual partners appear to be at greater risk of earlier intercourse, multiple sexual partners, lack of contraception, and pregnancy.[2, 17,79]

The School Context

The type of school that teenagers attend, characteristics of the students attending the school, student and teacher perceptions of school safety and crime, and the availability of sex education classes all influence adolescents' reproductive health behaviors.

Attending a private or Catholic school is associated with delayed sexual activity and a reduced risk of pregnancy and childbearing.[47, 69] Teens who attend schools that they, and their teachers, perceive as safe (with low levels of crime and vandalism) have a reduced likelihood of teen pregnancy and nonmarital childbearing. The same holds for teens who go to a school with a low percentage of low-income youths.[47, 60]

Studies that examine the effect of adolescent reports of sexuality education in school on reproductive health behaviors show mixed findings. Some studies show that sex education is linked to reduced sexual activity[44] and to increased contraceptive use.[50] But other studies conclude that teens' participation in sex education classes is associated with a higher risk of pregnancy and childbirth.[47, 60] These non-experimental studies may reflect differences in the types of schools or classes that provide regular sex education. Results from experimental studies are provided in the *What Works* table.

Providing contraceptives to students through school-based health clinics is not associated with earlier or increased sexual activity in teens,[40] but this practice has not been found to reduce the birth rate among adolescents either.[39] However, experimental evaluations of these programs have not been conducted, so it is difficult to determine their effectiveness.

The Neighborhood and Community Context

Although teens' individual characteristics and those of their families affect their reproductive health behavior the most, the neighborhoods and communities in which adolescents live may also influence their actions and attitudes. Many studies show that adolescents who live in

disadvantaged communities with high poverty rates are more likely to have sex, become pregnant, and give birth.[11, 28, 80] In contrast, teens who live in more affluent communities are less likely to engage in risky sexual activity.

The racial and ethnic composition of the neighborhood is associated with teens' behaviors. White teens living in communities with large black or foreign-born populations are more likely to delay first intercourse, possibly due to a reduced pool of available partners of the same ethnicity or race in these communities.[7, 11, 43] For some populations, adolescents who live in communities with large Hispanic populations have fewer sexual partners; however, teens in these communities appear to be less likely to use effective contraception than teens from other neighborhoods.[43] Neighborhood climate also plays a role. Adolescents who live in neighborhoods with higher crime rates are more likely to engage in risky sexual behaviors than those who live in lower-crime areas.[7]

Implications for Policy and Programs

Numerous studies have examined programs designed to bring about positive behavior in teens in general and positive reproductive health behavior in particular. Many of these programs show promising results, and the first three columns of the *What Works* table highlight those that were evaluated using experimental research. Four reproductive health outcomes (initiation of sexual intercourse, use of condoms for STD and/or pregnancy prevention, use of contraception, and pregnancies/births) are shown in the table. The full report (available on Child Trends' Web site) also includes: frequency of sexual activity, number of sexual partners, and contracting STDs.

Although the vast majority of reproductive health programs naturally focus on adolescents, some studies show that early investments in children will help improve their reproductive health behaviors years later. For example, experimental studies have found that high-quality, intensive early childhood programs are important in promoting long-term positive outcomes. In particular, adolescents who as children were enrolled in preschool or child care programs that focused on improving education among disadvantaged children have fewer pregnancies and births than those who were not enrolled in such programs.[12, 75]

Experimental studies indicate that adolescents involved in community volunteer service learning programs that feature community volunteering and classroom activities are less likely to be sexually active and become pregnant than teens not involved in such programs.[4, 38] Programs that combine a focus on youth development (including involvement in such activities as educational mentoring, employment, sports, or the performing arts) with sex education can have a strong impact on frequency of sex as well as pregnancies and births; however, effective programs in this area are intensive and long-term and so far appear to have greater success with girls than with boys.[53, 63] Vocational education programs have had minimal impacts on adolescents' reproductive health behaviors.[14, 74, 83]

Policy makers and practitioners alike have long been interested in whether sex education programs succeed in influencing teens' reproductive health behaviors. Many sex education programs combine abstinence messages for sexually *inexperienced* teens with messages about contraceptive use for sexually *experienced* adolescents. As shown in the *What Works* table, several of the eight experimentally evaluated sex education programs showed some positive impact on reproductive health behaviors for at least some groups of teens.[1, 21, 36, 81] More specifically, two of eight sex education programs delayed the initiation of sexual intercourse, one of three improved condom use, and three of five had a positive impact on overall contraceptive use. Only one abstinence-only education program has been evaluated with a rigorous experimental design so far, and it did not have a significant impact on reproductive health activities (sexual initiation, frequency of sex, or number of sex partners).[37] Current large-scale evaluations of abstinence-only programs should give us a better idea of how effective these programs are. Similarly, only one experimental program evaluated a project to improve parent-child communication about sex, and this program did not have an impact on teens' initiation of sexual intercourse.[56]

Among the seven HIV education programs that were experimentally evaluated, five were found to

Summary Table: Review of Research Studies for Targeted Activities to Improve Adolescent Reproductive Health

(Complete Table Available at www.childtrends.org)

	Experimental Research Studies			Non-Experimental Research Studies
AREAS FOR TARGETED INTERVENTION ACTIVITIES	WHAT WORKS	WHAT DOESN'T WORK	MIXED REVIEWS	RESULTS
Initiation of Sexual Intercourse	A program that included voluntary community service, preparation time, and time for reflection after service through activities such as group discussions, papers, or journaling had a positive impact (Reach for Health).[36]	- Only 1 abstinence-only education program has been experimentally evaluated and showed no impact on sexual activity (Postponing Sexual Involvement/ ENABL).[37] Future evaluations will assess the effectiveness of these programs. - Only 1 experimental study has examined the impact of programs to increase parent-child communication about abstinence, sexuality, or HIV. This program showed no impact on the initiation of sexual intercourse (Facts and Feelings).[38]	- 8 sexuality education programs experimentally evaluated sexual initiation as an outcome. Of these, 1 showed positive impacts for boys (Draw the Line/Respect the Line),[26] 1 showed positive impacts for girls (Postponing Sexual Involvement, Human Sexuality, and Health Screening),[1] 5 showed no impact (McMaster Teen Program,[43] Project SNAPP,[28] Safer Choices,[26] Teen Talk,[21] and Blake et al., 2000 in Michigan),[8] and 1 showed negative impacts for 9th and 10th graders (Healthy for Life Project).[39] - Of the 5 HIV/AIDS education programs that measured sexual initiation in experimental evaluations, 2 showed positive impacts (Becoming a Responsible Teen[29] and Be Proud! Be Responsible! A Sexual Abstinence Curriculum).[34] Three programs showed no impacts (Be Proud, Be Responsible;[33] Be Proud! Be Responsible! A Safer Sex Curriculum;[34] and YAPP).[40]	- Reduce related risky behaviors such as substance abuse and delinquency. - Focus on developing abstinence values among teens and encourage them to sign virginity pledges. - Work with adolescents to change their perception that most peers are sexually active and that sexual experience elicits respect from peers. - Improve educational performance and encourage teens to form high educational aspirations. - Promote participation in sports (effective for girls only). - Place importance on religious and moral beliefs, church attendance, religiosity, religious activities. - Recognize that having an older sibling who is sexually experienced is a risk factor for early sexual initiation. - Promote stability in parents' marital status; Improve family economic standing and parent education. - Strengthen parent-child emotional bonds and relationships, parental monitoring and communication. - Encourage friendships with peers who favor delayed sexual initiation and with same-age peers (as opposed to older teens), or change peer group values. - Reduce non-voluntary sexual experiences. - Delay teen involvement in romantic relationships. - Programs short in duration appear to have no association with outcomes, suggesting longer durations are more effective.
Use of Condoms for STD and/or Pregnancy Prevention		- Only 1 abstinence-only education program has been experimentally evaluated and showed no impact on condom use (Postponing Sexual Involvement/ENABL).[37] Few strong evaluations of abstinence-only programs have been conducted. Future evaluations will assess the effectiveness of these programs.	- 3 sexuality education programs focused on condom use as an outcome. One program had a positive impact (Safer Choices)[26] and 2 programs showed no impacts (Healthy for Life Project[39] and Project SNAPP).[28] - 7 HIV/AIDS education programs measured condom use as an outcome. 3 programs had a positive impact (Becoming a Responsible Teen;[29] Be Proud, Be Responsible;[33] and Be Proud! Be Responsible! A Safer Sex Curriculum);[34] 3 had no impact (YAPP;[40] Gilmore et al. 1997 in Seattle;[23] and Slonim-Nevo et al. 1996 in St. Louis);[17] and 1 had some positive impacts that varied by length of follow-up (Be Proud! Be Responsible! A Sexual Abstinence Curriculum).[34] - Clinic-based programs that include counseling and instruction from a medical provider, give a clear message about sexual activity and contraceptive use, and include 1-on-1 counseling may have had mixed impacts on condom use. 2 such programs showed positive impacts (DeLamater et al. 2000 in Milwaukee, WI;[14] Orr et al. 1996 in Indianapolis, IN),[44] and 1 had mixed impacts depending on length of follow-up (ASSESS).[10]	- Reduce other risky behaviors such as substance abuse and delinquency. - Convey to parents the importance of talking to teens about HIV and condom use and of expressing disapproval for teen sexual activity. - Advocate strong parental monitoring. - Promote high parent education levels. - Work to change adolescents' perception that peers do not like or use condoms. - Talk with partner about sexual risks (findings based on non-representative sample – blacks & Hispanics in AL, NY and Puerto Rico). - Programs short in duration appear to have no association with outcomes, suggesting longer durations are more effective.

Reference list can be found in Preventing Teenage Pregnancy, Childbearing, and Sexually Transmitted Diseases: What the Research Shows, Child Trend Research Brief.

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	Experimental Research Studies			Non-Experimental Research Studies
AREAS FOR TARGETED INTERVENTION ACTIVITIES	WHAT WORKS	WHAT DOESN'T WORK	MIXED REVIEWS	CASE STUDIES
Use of Contraception		- Only 1 abstinence-only education program has been evaluated and showed no impact on contraceptive use (Postponing Sexual Involvement/ENABL).[37] Few strong evaluations of abstinence-only programs have been conducted. Future evaluations will assess the effectiveness of these programs.	- 5 sexuality education programs measured contraceptive use as an outcome in experimental studies. Of these, 1 showed a positive impact (Safer Choices),[38] 1 had positive impacts for boys only (Teen Talk),[31] 1 had a positive impact for girls only (Postponing Sexual Involvement, Human Sexuality, and Health Screening),[1] and 2 showed no impacts (McMaster Teen Program[41] and Project SNAPP).[39] - Intensive long-term youth development programs that combine youth development and sexuality education (CAS-Carrera had a significant impact for females but not males[42] and Washington State for contraceptive use at most recent sex at 1 of 3 sites and for always use contraceptives at 2 of 3 sites).[33] - 2 clinic-based programs aimed to improve contraceptive use. 1 program had a positive impact (Danielson et al. 1990 in Portland, OR and Vancouver, WA),[14] while the other had no impact (Herceg-Baron et al. 1986 in Philadelphia).[35]	- Reduce other risky behaviors such as substance abuse and delinquency. - Implement contraceptive education in schools. - Promote participation in sports (found effective for girls only). - Provide supports for maintaining intact families. - Strengthen parent-child relationships. - Promote high parent education levels. - Encourage teens to date partners close to their own age, rather than older partners. - Eliminate non-voluntary sexual experiences. - Programs short in duration appear to have no association with outcomes, suggesting longer durations are preferable. - Attending schools with school-based or school-linked health clinics that provide contraceptives, focus intensely on contraception, and give a clear message about their use and oral contraceptive was associated with increased contraceptive use.
Pregnancies and Births	- Programs that include voluntary community service, preparation time, and time for reflection after service through activities such as group discussions, papers, or journaling (Teen Outreach Program).[4] - Early childhood programs that include strong preschool or child care for low-income families reduce the likelihood of pregnancies and births during the teen years (Abecedarian)[20] and out of wedlock births by age 27 (High/Scope Perry Pre-School).[26] - Nurse home visiting programs, in which trained nurses visit expectant teen mothers before and after the baby is born and help promote maternal and child outcomes reduce subsequent pregnancies (Olds).[43]	- Welfare demonstration programs have shown minimal effects on subsequent fertility (New Chance[44] and TPD).[45] - Neither of the 2 sexuality education programs that focused on pregnancy/births had an impact (McMaster Teen Program[41] and Project SNAPP).[39] - The only clinic-based program to measure pregnancy outcomes showed no impact (Herceg-Baron et al. 1986 in Philadelphia).[35]	- One short-term youth development program showed no impact on birth rates, except in the Philaddphia site (Quantum Opportunities).[36] - Of the 4 vocational education programs that measured pregnancies and births as an outcome, only one showed a positive impact (Conservation and Youth Service Corps).[32] This positive impact was observed for black women only; there was no impact on non-Hispanic white or Hispanic women. The other 3 programs vocational education programs had no impact (Job Corps,[34] JOBSTART,[35] STEP).[47] - One intensive long-term program that combines youth development and sexuality education (CAS-Carrera for females but not males).[42]	- Focus on delaying age of sexual debut. - Reduce related risky behaviors such as substance abuse and delinquency. - Improve educational performance; discourage dropping out of school. - Encourage teens to form high educational aspirations and to develop friendships with peers who have also high educational aspirations; convey to parents the importance of having college expectations for their adolescents (found effective for boys). - Promote participation in sports (found effective for girls only). - Promote church attendance/ religiosity/ religious activity. - Encourage parent-child communication about pregnancy. - Strengthen parent-child emotional bonds and relationships; emphasize importance of shared activities between parents and children. - Improve family socioeconomic standing and provide supports to maintain intact families. - Recognize that having an older sibling who is a teen parent is a risk factor. - Focus on ways to reduce "intergenerational transmission" of teenage sexual behaviors from mothers to children. - Encourage teens to date partners close to their own age, rather than older partners. - Eliminate non-voluntary sexual experiences. - Attend school with higher socioeconomic status and lower crime levels; live in a community with higher socioeconomic status and lower crime. - The impact of family planning services or clinics on pregnancy or birth outcomes has not been adequately estimated. - Community-wide pregnancy or HIV prevention initiatives have not been shown to be associated with pregnancy or birth outcomes (quasi-experimental).

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have some positive impact on sexual activity and contraceptive use for at least some groups of teens.[33, 34, 78] Two of five HIV education programs delayed the onset of sexual intercourse, three of five showed some positive impact on frequency of sexual activity, one of four reduced the number of sexual partners, and three of seven showed improvements in condom use.

Those sex education and HIV education programs found to influence teens' behavior positively have multiple components, are based on theoretical approaches; deliver clear, accurate messages; engage participants in curriculum-based activities; practice communication and refusal skills; are appropriate to the age, culture and experience of participants; and provide appropriate training for teachers or peer leaders.[36]

Of the five clinic-based programs evaluated with experimental designs, two were found to have some positive impact on condom use for STD and/or pregnancy prevention, one had a beneficial influence on contraceptive use, and one reduced STDs.[16, 18, 64] Those programs featured one-on-one counseling and delivered clear messages about abstinence and contraceptive use.[36]

In various studies, school-based health centers and programs that provide condoms have been found to have both positive and negative effects on teen reproductive health behaviors. However, it is impossible to draw concrete conclusions about these programs because the studies have not had rigorous experimental evaluations.[36] Similarly, as yet, most community-wide initiatives to influence teen reproductive behavior have been largely unsuccessful.[36] The minimal effects of initiatives may be due to their extremely challenging goal of attempting to affect community-wide outcomes. Moreover, experimental studies at the community level are almost impossible to mount, so research is at best quasi-experimental.

Child Trends also looked at several programs that aim to delay repeat births among teenage mothers. Although several research studies suggest that welfare benefit levels may influence reproductive health behaviors in adolescents,[27, 30, 31, 48, 71] experimental studies of welfare demonstration programs have shown a failure to reduce subsequent births to teen mothers.[41, 66] However, a nurse home visiting approach, in which nurses visit expectant teens and teenage mothers in their homes for more than two years, has been found to lower the likelihood of those mothers having more children.[63]

What Works?

The *What Works* table, based on a review of more than 150 adolescent reproductive health studies, identifies which programs and approaches designed to prevent risky behavior or promote healthy behavior are likely to succeed.

The headings on the left identify the areas targeted for intervention:

- The "What Works" column describes programs in this area that have been found to be effective through experimental evaluations.
- The "What Doesn't Work" column lists interventions or activities that have been tried and proven ineffective with experimental evaluations.
- The "Mixed Reviews" column highlights elements that have been shown, through experimental evaluations, to be effective in some, but not all, programs or for some groups of adolescents but not all teens. Where there are empty spaces in the table, it means that little evidence has been found for or against programs in that particular area.
- Finally, the "Best Bets" column describes promising findings from research studies that take account of other factors related to reproductive health such as poverty, parent education, and residence but that have not been tested with experimental designs. It also includes results from quasi-experimental studies, and wisdom from practitioners working in the field.

For a more detailed version of this table, with links to research and program descriptions, consult Child Trends' Web site at www.childtrends.org.

Conclusion

Many solid research studies in the field of adolescent reproductive health identify activities and behaviors that may lead teens to become sexually experienced, to be currently sexually active, to have multiple sexual partners, to use contraception, to become pregnant, to have a birth in the teenage years, or to engage in sexual behaviors that may lead to contracting a sexually transmitted disease. By examining this research, policy makers and service providers can help develop programs to help adolescents delay sex, avoid pregnancy, and prevent sexually transmitted diseases.

There are far fewer high-quality experimental evaluations of those programs to help guide policy makers and practitioners. But those that do exist point to a number of approaches that work, which include some sexuality education and HIV education programs, but also include a variety of other approaches. Promising programs to improve reproductive health outcomes include those that focus on early childhood investments, that involve teens in school and in outside activities (including youth development in combination with sexuality education and community volunteer learning), and those that send nurses to visit teenage mothers, which reduce their chances of becoming pregnant again. Combining successful approaches from experimental evaluations with "Best Bet" strategies may amplify the effectiveness of future interventions.

This research review gives us a better understanding of how some specific programs can supplement traditional sex education, HIV education programs, and clinics to help bring levels of teen pregnancy, childbearing, and sexually transmitted diseases in the U.S. down to levels that are more comparable to other industrialized countries and give our teens and young children a more promising future.

This *Research Brief* summarizes a longer report by Jennifer Manlove, Ph.D., Elizabeth Terry-Humen, M.P.P., Angela Romano Papillo, M.A., Kerry Franzetta, Stephanie Williams, and Suzanne Ryan, Ph.D., which was prepared for the John S. and James L. Knight Foundation. Kristin Anderson Moore, Ph.D., is the Principal Investigator and Jonathan Zaff, Ph.D., is the Project Director. The brief was prepared by Anne Bridgman and was edited by Amber Moore, Harriet J. Scarupa, Kristin Moore and the study's authors. For more information on this report, *Background for Community-Level Work on Positive Reproductive Health in Adolescence: Reviewing the Literature on Contributing Factors* (2001, Child Trends: Washington, D.C.), call the Child Trends' publications office, 202-362-5580. Publications may also be ordered from Child Trends' Web site, www.childtrends.org.

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